

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P231995

Luminaire Tested: **FVS4M-4-LD4-50-2LO-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-4-LD4-50-2LO-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 2-MODULE LED WITH PFS125 LENS  
Light Source: (168) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

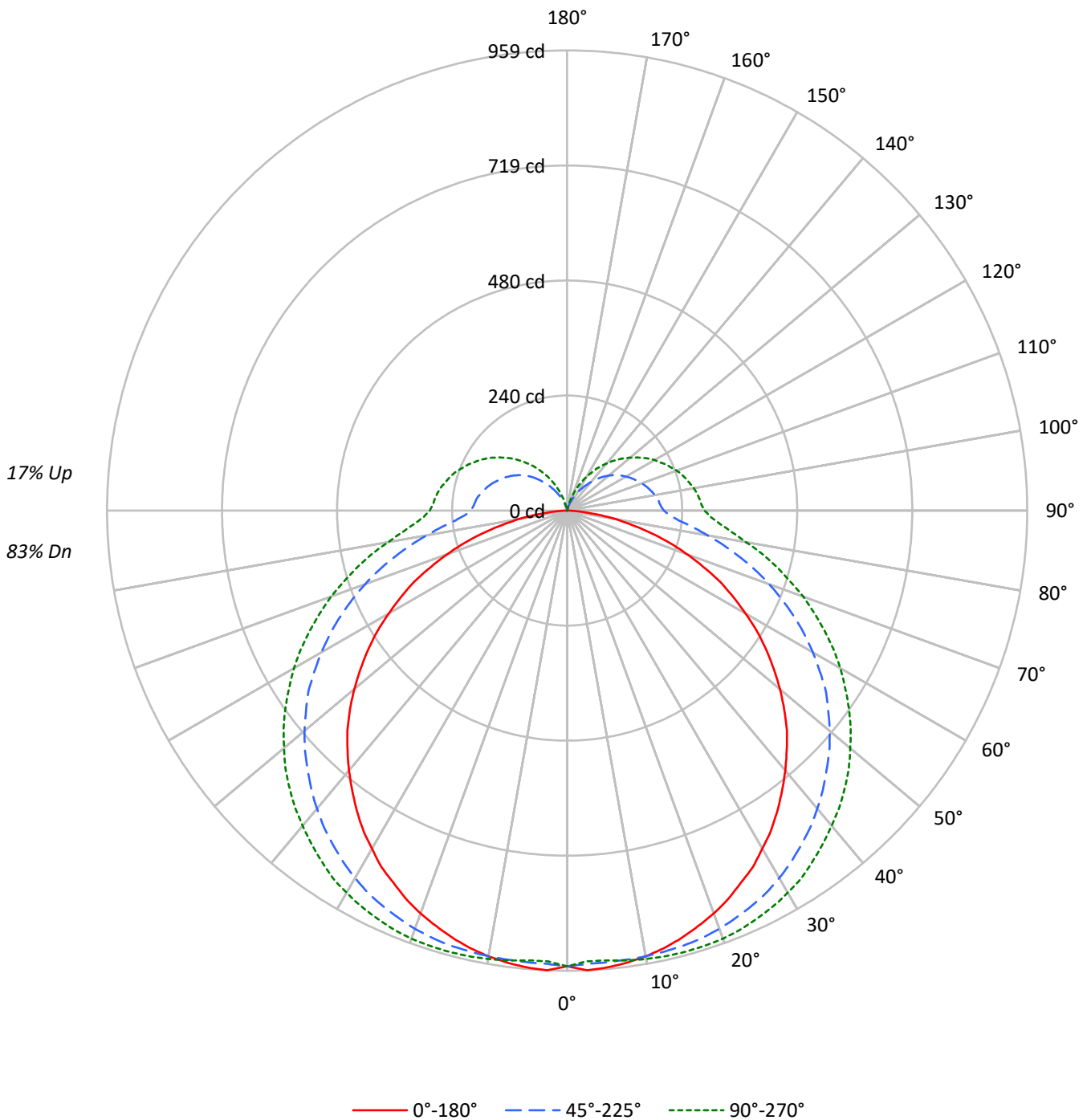
Lumens per Lamp: N/A  
Luminaire Lumens: 4256.0 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 57.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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CATALOG NUMBER: FVS4M-4-LD4-50-2LO-PFS125-UNV-EDC1

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	115	115	115	115	110	110	110	110	102	102	102	94	94	94	87	87	87	83
1	103	97	92	88	98	93	89	85	86	82	79	79	76	74	73	71	68	65
2	93	83	76	69	88	80	73	67	74	68	63	68	63	59	63	59	56	52
3	84	72	64	57	80	70	62	55	64	57	52	59	54	49	55	50	46	43
4	76	64	54	47	73	61	53	46	57	49	44	52	46	41	48	43	39	36
5	70	56	47	40	67	54	46	39	50	43	37	47	40	35	43	38	33	31
6	64	51	41	35	61	49	40	34	45	38	32	42	36	31	39	33	29	27
7	59	46	37	30	57	44	36	30	41	34	28	38	32	27	35	30	26	23
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	21
9	51	38	29	24	49	37	29	23	34	27	22	32	26	21	30	24	20	18
10	48	35	27	21	46	34	26	21	32	25	20	29	24	19	28	22	18	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8626	8626	8626
5°	8679	8284	8152
10°	8626	8050	7915
15°	8559	7860	7712
20°	8487	7683	7535
25°	8387	7508	7345
30°	8296	7332	7165
35°	8188	7137	6967
40°	8053	6943	6764
45°	7927	6732	6570
50°	7727	6525	6347
55°	7496	6298	6113
60°	7189	5987	5860
65°	6851	5649	5561
70°	6218	5258	5247
75°	5384	4802	4893
80°	4212	4305	4496
85°	2151	3885	4237



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.5	2.1
10°-20°	265.7	6.2
20°-30°	417.8	9.8
30°-40°	527.1	12.4
40°-50°	580.1	13.6
50°-60°	570.1	13.4
60°-70°	495.6	11.6
70°-80°	368.4	8.7
80°-90°	235.2	5.5
90°-100°	185.7	4.4
100°-110°	164.6	3.9
110°-120°	135.2	3.2
120°-130°	101.6	2.4
130°-140°	66.9	1.6
140°-150°	36.1	0.8
150°-160°	13.7	0.3
160°-170°	1.9	0.0
170°-180°	0.0	0.0
0°-30°	773.9	18.2
0°-40°	1301.0	30.6
0°-60°	2451.2	57.6
0°-90°	3550.4	83.4
90°-120°	485.4	11.4
90°-150°	690.0	16.2
90°-180°	706.0	16.6
0°-180°	4256.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	956	952	945	946	941	91
15°	922	927	939	953	952	260
25°	856	879	910	936	938	395
35°	764	802	850	886	892	478
45°	648	701	765	809	818	499
55°	507	578	658	705	717	453
65°	352	432	522	578	592	346
75°	182	272	371	432	452	192
85°	32	130	233	298	319	41
90°	0	96	201	267	286	1
95°	0	90	193	257	277	0
105°	0	79	176	238	256	0
115°	0	66	154	211	227	0
125°	0	52	128	177	192	0
135°	0	35	97	139	150	0
145°	1	18	61	98	106	1
155°	1	6	28	49	58	0
165°	1	0	5	8	13	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231995

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6
2.5°	959.0	957.5	955.1	954.3	955.1	955.1	955.1	953.5	949.6	945.7	945.7
5°	955.9	955.1	951.9	951.2	951.9	952.7	952.7	951.2	948.0	944.9	944.9
7.5°	950.4	949.6	947.2	946.4	948.0	948.8	949.6	948.0	946.4	944.1	944.9
10°	943.3	941.7	940.1	939.4	940.9	943.3	944.9	944.9	944.1	943.3	945.7
12.5°	933.9	933.1	930.7	931.5	933.9	937.8	940.1	941.7	941.7	940.9	944.9
15°	922.1	922.1	920.5	921.3	924.4	929.9	933.9	936.2	937.0	938.6	942.5
17.5°	907.9	908.7	907.1	908.7	915.0	921.3	926.8	929.1	931.5	933.9	939.4
20°	893.7	893.7	892.2	896.1	902.4	910.2	915.8	920.5	923.6	927.6	933.1
22.5°	876.4	876.4	876.4	881.1	889.0	896.9	905.5	911.0	915.0	918.9	926.0
25°	856.0	858.3	857.5	864.6	874.1	884.3	892.2	897.7	904.0	909.5	917.3
27.5°	837.9	836.3	837.9	845.7	856.8	866.2	877.2	883.5	890.6	898.4	906.3
30°	813.5	812.7	816.6	826.1	837.1	849.7	859.9	867.8	876.4	884.3	893.7
32.5°	790.7	788.3	793.8	805.6	816.6	831.6	841.0	849.7	858.3	868.6	878.0
35°	763.9	763.1	769.4	781.2	795.4	809.5	822.1	832.4	841.0	850.5	862.3
37.5°	735.6	738.7	744.2	756.0	771.8	786.7	799.3	809.5	819.8	832.4	844.2
40°	707.3	708.8	715.1	730.1	746.6	762.3	775.7	785.2	799.3	811.1	822.9
42.5°	677.4	676.6	689.2	704.1	719.9	737.2	750.5	763.1	776.5	789.1	801.7
45°	647.5	645.1	657.7	674.2	691.5	709.6	725.4	739.5	752.1	764.7	777.3
47.5°	613.7	614.4	627.8	644.3	663.2	681.3	703.3	712.0	725.4	741.1	753.7
50°	579.0	579.0	594.8	612.9	631.0	652.2	667.9	683.7	700.2	714.4	727.7
52.5°	542.8	546.0	560.2	580.6	601.9	619.9	636.5	655.3	671.1	686.0	699.4
55°	506.7	509.8	527.9	546.0	568.8	587.7	605.8	623.1	639.6	658.5	670.3
57.5°	469.7	474.4	490.9	510.6	531.8	553.9	574.3	590.8	608.9	624.7	639.6
60°	429.6	436.6	452.4	472.0	496.4	518.5	538.1	556.2	574.3	591.6	605.8
62.5°	390.2	396.5	413.8	434.3	458.7	483.1	500.4	522.4	540.5	557.0	572.7
65°	352.5	357.2	376.1	396.5	420.9	442.9	465.0	485.4	503.5	521.6	538.1
67.5°	307.6	316.3	334.4	357.2	381.6	404.4	425.6	447.7	467.3	484.6	501.1
70°	265.9	273.8	291.9	316.3	342.2	367.4	389.4	409.9	430.3	447.7	464.2
72.5°	224.2	232.9	251.0	273.0	299.7	323.3	347.7	370.6	392.6	410.7	427.2
75°	181.7	189.6	210.1	234.4	261.2	282.4	310.0	331.2	352.5	371.3	390.2
77.5°	136.9	148.7	167.6	193.5	218.7	245.5	270.6	293.5	313.9	334.4	354.0
80°	103.1	109.4	127.5	155.8	180.2	207.7	231.3	255.7	278.5	296.6	314.7
82.5°	62.9	72.4	95.2	117.2	147.1	170.7	197.5	221.1	243.1	263.6	280.9
85°	32.3	42.5	62.2	88.9	116.4	144.0	166.8	191.2	213.2	232.9	251.0
87.5°	9.4	18.9	40.9	66.1	93.6	121.2	146.3	169.9	192.0	212.4	230.5
90°	0.0	9.4	30.7	55.9	82.6	109.4	134.5	158.9	180.9	201.4	219.5
92.5°	0.0	8.7	28.3	52.7	79.5	105.4	130.6	154.2	175.4	195.9	214.0
95°	0.0	7.9	26.7	51.1	77.1	103.1	128.2	151.8	173.1	192.7	210.8
97.5°	0.0	7.1	25.2	48.8	74.7	99.9	125.1	148.7	169.9	190.4	208.5
100°	0.0	6.3	24.4	47.2	72.4	96.8	121.9	144.8	166.0	185.7	203.8
102.5°	0.0	5.5	22.8	44.8	69.2	94.4	118.0	140.8	162.1	180.9	199.0
105°	0.0	5.5	21.2	43.3	66.9	91.3	114.1	136.9	157.3	176.2	194.3
107.5°	0.0	4.7	20.5	40.9	64.5	87.3	110.1	132.2	152.6	171.5	188.8
110°	0.0	3.9	18.9	39.3	61.4	84.2	107.0	128.2	147.9	166.0	183.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	3.1	17.3	37.0	58.2	80.2	102.3	122.7	142.4	159.7	176.2
115°	0.0	2.4	16.5	34.6	55.9	77.1	97.6	118.0	136.9	154.2	169.9
117.5°	0.0	1.6	14.9	32.3	52.7	73.2	93.6	113.3	131.4	147.9	163.6
120°	0.0	1.6	13.4	30.7	49.6	69.2	88.9	107.8	125.9	141.6	156.6
122.5°	0.0	0.8	11.8	28.3	46.4	65.3	84.2	102.3	118.8	135.3	149.5
125°	0.0	0.8	10.2	26.0	43.3	61.4	79.5	96.8	113.3	128.2	142.4
127.5°	0.0	0.8	8.7	22.8	39.3	56.6	74.0	90.5	107.0	121.2	134.5
130°	0.0	0.8	7.1	20.5	35.4	51.9	68.4	84.2	99.9	113.3	126.7
132.5°	0.0	0.8	5.5	17.3	31.5	46.4	61.4	77.1	91.3	105.4	118.0
135°	0.0	0.0	3.9	14.9	27.5	41.7	55.1	69.2	83.4	96.8	109.4
137.5°	0.8	0.8	3.1	12.6	24.4	36.2	49.6	62.2	74.7	87.3	99.9
140°	0.8	0.8	2.4	10.2	20.5	32.3	43.3	55.1	66.9	77.9	88.9
142.5°	0.8	0.8	1.6	7.9	17.3	27.5	37.8	48.8	59.0	68.4	78.7
145°	0.8	0.8	1.6	5.5	14.2	22.8	33.0	41.7	51.1	60.6	68.4
147.5°	0.8	0.8	0.8	3.9	11.0	18.9	27.5	35.4	44.1	51.9	59.0
150°	0.8	0.8	0.8	3.1	8.7	15.7	22.8	29.1	37.0	43.3	50.4
152.5°	0.8	0.8	0.8	2.4	6.3	12.6	18.1	24.4	29.9	36.2	40.9
155°	0.8	0.8	0.8	1.6	3.9	8.7	14.2	18.9	23.6	28.3	33.0
157.5°	0.8	0.8	0.8	0.8	2.4	5.5	10.2	14.2	18.1	21.2	26.0
160°	0.8	0.8	0.8	0.8	1.6	3.1	6.3	9.4	12.6	15.7	18.1
162.5°	0.8	0.8	0.8	0.0	0.8	1.6	3.1	5.5	7.9	10.2	11.8
165°	0.8	0.8	0.8	0.0	0.0	0.0	0.8	1.6	3.1	4.7	5.5
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.6	949.6	949.6	949.6	949.6	949.6	949.6	949.6
2.5°	946.4	947.2	946.4	945.7	944.1	942.5	940.9	940.1
5°	946.4	947.2	946.4	946.4	944.9	943.3	941.7	940.9
7.5°	948.0	948.8	948.8	948.8	948.8	948.0	946.4	945.7
10°	948.8	951.2	951.9	951.9	951.9	951.2	950.4	948.8
12.5°	948.8	951.9	952.7	953.5	954.3	953.5	951.9	951.2
15°	947.2	951.2	952.7	953.5	954.3	954.3	952.7	951.9
17.5°	944.9	948.8	951.2	951.9	953.5	952.7	951.9	951.2
20°	939.4	944.1	947.2	949.6	950.4	951.2	950.4	949.6
22.5°	933.1	937.8	941.7	944.1	945.7	946.4	945.7	944.9
25°	924.4	929.9	934.6	937.0	938.6	940.1	939.4	937.8
27.5°	914.2	919.7	924.4	927.6	930.7	930.7	930.7	929.9
30°	900.8	907.9	912.6	916.5	918.9	920.5	920.5	919.7
32.5°	887.4	894.5	899.2	904.0	906.3	907.1	907.9	908.7
35°	870.9	878.0	884.3	888.2	891.4	892.9	892.9	892.2
37.5°	852.8	861.5	867.8	871.7	876.4	876.4	876.4	875.6
40°	832.4	840.2	848.1	852.8	857.5	858.3	857.5	857.5
42.5°	812.7	820.6	827.6	833.1	836.3	837.9	838.7	839.4
45°	789.1	798.5	805.6	811.9	815.1	817.4	818.2	818.2
47.5°	763.9	774.1	782.0	787.5	792.2	795.4	793.8	796.2
50°	739.5	748.2	757.6	762.3	767.1	771.0	770.2	770.2
52.5°	712.0	720.6	730.1	737.2	741.1	744.2	745.0	745.0
55°	682.1	692.3	701.8	708.1	712.8	715.1	716.7	716.7
57.5°	652.2	662.4	671.1	679.7	684.5	688.4	688.4	686.8
60°	619.9	631.0	640.4	647.5	655.3	656.1	656.9	657.7
62.5°	586.9	597.9	608.1	616.8	620.7	624.7	627.0	625.5
65°	552.3	561.7	575.1	580.6	586.1	588.5	592.4	591.6
67.5°	517.7	529.5	538.1	547.6	553.9	554.6	559.4	557.0
70°	478.3	490.1	502.7	509.0	516.1	518.5	520.8	523.2
72.5°	442.1	454.7	465.0	474.4	478.3	482.3	485.4	486.2
75°	404.4	419.3	427.2	437.4	442.9	446.1	450.8	451.6
77.5°	366.6	380.0	391.8	398.9	406.0	409.9	413.0	416.2
80°	329.6	341.4	354.8	365.0	372.1	375.3	379.2	378.4
82.5°	296.6	310.0	321.8	330.4	338.3	343.0	346.9	346.9
85°	269.1	284.0	293.5	302.9	310.0	314.7	318.6	319.4
87.5°	248.6	262.0	274.6	282.4	290.3	295.0	298.2	299.0
90°	236.0	250.2	262.0	271.4	278.5	283.2	286.4	286.4
92.5°	230.5	243.9	256.5	265.1	272.2	276.9	279.3	280.1
95°	227.4	240.7	252.5	262.0	269.1	273.8	276.1	276.9
97.5°	224.2	237.6	248.6	258.8	265.1	269.8	272.2	273.0
100°	219.5	232.9	244.7	253.3	261.2	265.1	267.5	268.3
102.5°	214.8	227.4	239.2	247.8	254.9	258.8	262.0	262.0
105°	209.3	223.4	233.7	242.3	249.4	254.1	255.7	256.5
107.5°	203.8	217.1	228.2	236.8	243.1	247.0	250.2	250.2
110°	198.3	210.8	221.1	229.7	236.0	240.0	242.3	243.1





TEST NUMBER: P231995

CATALOG NUMBER: FVS4M-4-LD4-50-2LO-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	191.2	203.8	214.0	222.6	228.2	232.1	234.4	234.4
115°	184.1	196.7	206.9	215.6	221.1	225.0	226.6	227.4
117.5°	177.0	188.8	199.0	206.9	212.4	216.4	217.9	217.9
120°	169.9	181.7	191.2	199.0	204.6	207.7	210.1	210.8
122.5°	162.1	173.1	182.5	190.4	195.9	199.0	200.6	201.4
125°	154.2	165.2	173.9	180.9	186.5	189.6	192.0	192.0
127.5°	146.3	156.6	165.2	171.5	176.2	179.4	180.9	181.7
130°	137.7	146.3	155.0	161.3	166.8	169.1	171.5	171.5
132.5°	129.0	137.7	145.5	152.6	155.8	158.9	161.3	161.3
135°	120.4	128.2	136.1	141.6	145.5	148.7	150.3	150.3
137.5°	110.9	119.6	126.7	131.4	135.3	137.7	139.3	140.0
140°	100.7	110.1	115.6	120.4	124.3	126.7	128.2	128.2
142.5°	88.9	98.3	105.4	110.9	113.3	114.9	117.2	117.2
145°	77.9	86.5	95.2	99.9	103.1	104.6	105.4	106.2
147.5°	66.9	74.7	82.6	88.1	91.3	92.0	92.8	92.8
150°	56.6	62.9	70.0	77.1	79.5	81.0	81.8	82.6
152.5°	47.2	51.9	58.2	63.7	68.4	69.2	70.0	70.0
155°	37.8	42.5	46.4	51.1	56.6	57.4	58.2	58.2
157.5°	29.1	32.3	35.4	38.5	43.3	46.4	46.4	47.2
160°	20.5	23.6	25.2	27.5	30.7	34.6	34.6	34.6
162.5°	13.4	14.9	16.5	17.3	18.9	22.0	23.6	23.6
165°	7.1	7.1	7.9	8.7	9.4	10.2	12.6	13.4
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)